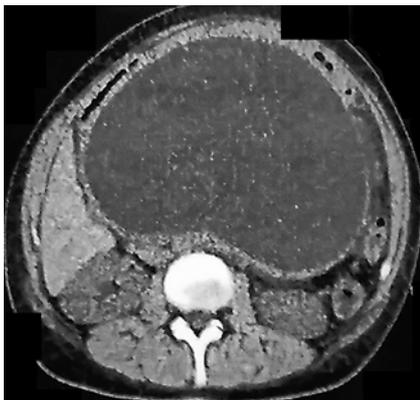
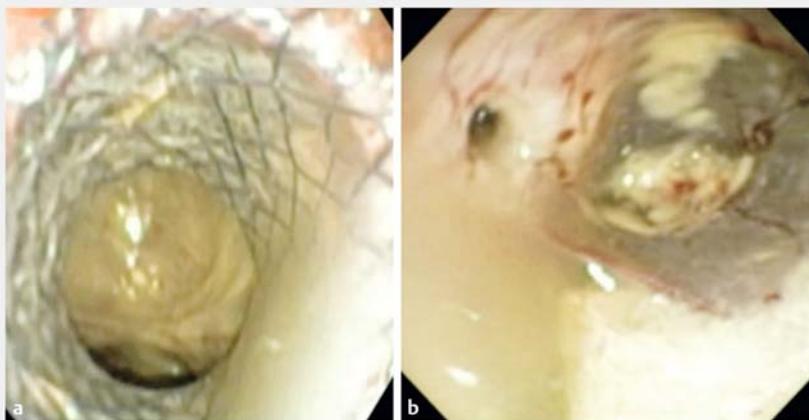


Self-expandable metal stent in lumen-apposing metal stent (the SEMS-in-LAMS procedure): a simple salvage procedure after LAMS misplacement



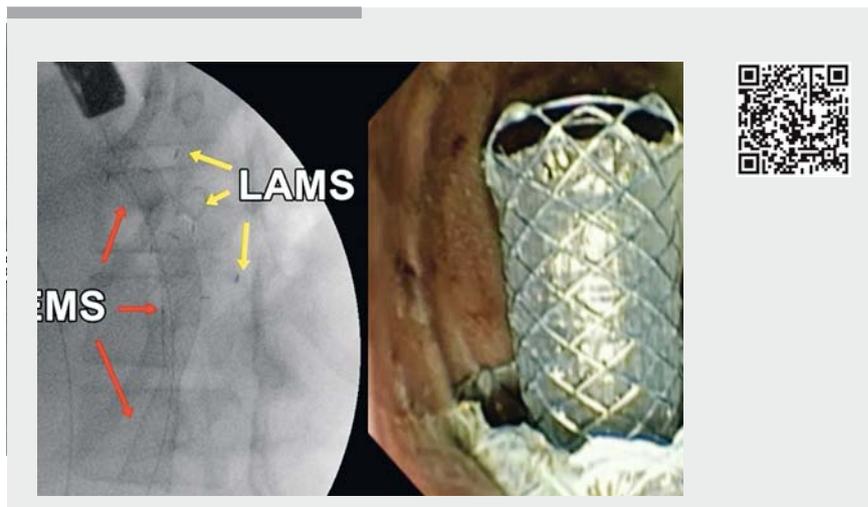
► **Fig. 1** Computed tomography scan showing a large pancreatic pseudocyst (20.3 × 16.8 × 15.0 cm; total volume 2660 mL).



► **Fig. 2** Endoscopic view of the lumen-apposing metal stent (LAMS) after traction with forceps showing: **a** the proximal flange of the LAMS in the gastric lumen; **b** the retroperitoneum and the orifice in the pseudocyst wall.

Lumen-apposing metal stents (LAMSs) have been widely used for drainage of pancreatic fluid collections (PFCs) [1]. However, misplacement of stents is not rare and demands immediate intervention. We describe the use of a biliary self-expandable metal stent (SEMS) placed through the LAMS to address misplacement during an endoscopic ultrasound (EUS)-guided drainage procedure.

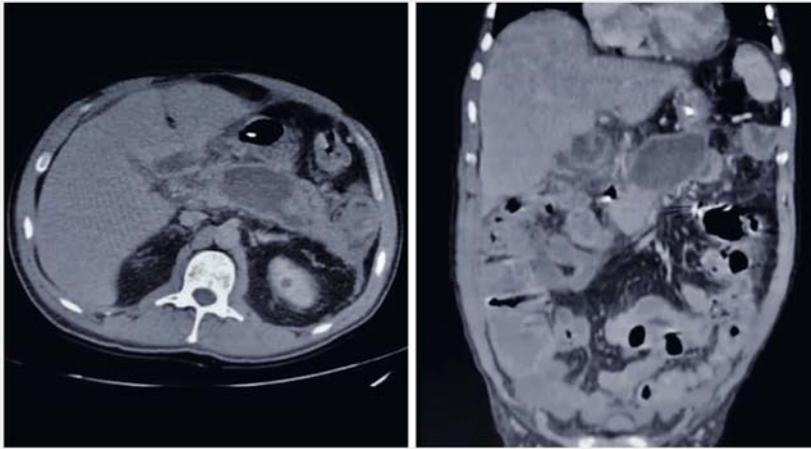
In the first case, a 24-year-old woman presenting with a symptomatic PFC (► **Fig. 1**) after an episode of moderate acute pancreatitis was referred for EUS-guided drainage. During deployment of the LAMS (3 cm × 12–15 mm; Hanarostent; Mitech), we accidentally released the proximal flange into the gastric wall. We pulled the stent towards the gastric lumen using a foreign body forceps, but the distal flange detached from the collection, dissecting the retroperitoneum (► **Fig. 2**). We therefore placed a guidewire into the PFC through the LAMS using a pediatric endoscope. Finally, we deployed a biliary fully-covered SEMS (10 mm × 6 cm; Hanarostent; Mitech) to connect the PFC to the stomach (► **Video 1**). Both stents were removed a month later without complications.



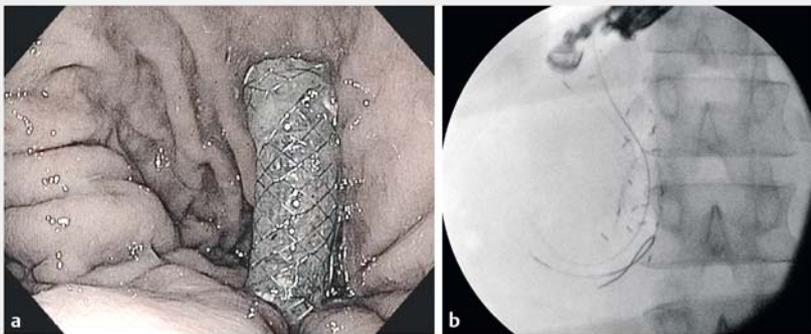
► **Video 1** Deployment of a self-expandable metal stent (SEMS) through a lumen-apposing metal stent (LAMS) after LAMS misplacement during endoscopic ultrasound-guided drainage of a pancreatic fluid collection: the SEMS-in-LAMS procedure.

In the second case, a 50-year-old man presenting with a symptomatic walled-off necrosis (► **Fig. 3**) after a severe episode of pancreatitis was referred for EUS-guided drainage. During the procedure, the proximal flange was accidentally deployed into the gastric wall (► **Fig. 4**). Under EUS guidance, we intro-

duced the sheath of the needle and a guidewire through the LAMS into the PFC. We deployed a fully-covered biliary SEMS inside the LAMS, thereby creating a communication between the PFC and the stomach (► **Fig. 5**). Both stents were removed at 1-month follow-up without complications.



► **Fig. 3** Computed tomography scan showing a walled-off necrosis (6.4×4.1 cm).



► **Fig. 5** Final appearance of the self-expandable metal stent in lumen-apposing metal stent (SEMS-in-LAMS) procedure on: **a** endoscopic view; **b** radiographic view.

The short dumbbell shape of the LAMS draws together the wall of the collection and the lumen, thereby stabilizing the stent [2]; however, this short length may favor misdeployment. Ligresti et al. [3] recently reported a LAMS-in-LAMS procedure to address a buried stent. However, a standard biliary SEMS seems more appropriate to use as it is cheaper, widely available, and longer. This is the first description of the SEMS-in-LAMS procedure as salvage therapy after LAMS misplacement.

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Competing interests

None

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► **Fig. 4** Endoscopic view showing the proximal edge of the lumen-apposing metal stent embedded into the gastric wall.

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